

Conference: Star Formation Across Space and Time

Location: University of Arizona, Tucson

Dates: April 1-2, 2011

Title: "I Zw 18, a Template for Star-Forming, $z > 7$ Galaxies"

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Abstract:

I Zw 18-NW, one of the most primitive nearby dwarf galaxies, is arguably the best template we have for star-forming, very high-redshift galaxies ($z > 7$). We have therefore obtained a far-UV spectrum of I Zw 18-NW using Hubble's Cosmic Origins Spectrograph (COS). The spectrum indicates star-formation over the past ~ 10 Myr, a very low stellar metallicity, $\log Z/Z_{\text{sun}} \sim -1.7$, and high average stellar rotation rate, $V_{\text{sin} i} \sim 200$ km/s. Stellar wind lines are very weak, and the edge velocity of wind lines is very low (~ 250 km/s). The overall properties of I Zw 18-NW are consistent with theories of very low metallicity, rapidly rotating stars, e.g. Meynet et al. (2006).